Configurations

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R1

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Last configuration change at 22:12:33 UTC Thu Oct 3 2019

version 15.2

service timestamps debug datetime msec

service timestamps log datetime msec

no service password-encryption

hostname R1

boot-start-marker

boot-end-marker

no aaa new-model

memory-size iomem 10

ip cef

ipv6 unicast-routing

ipv6 cef

multilink bundle-name authenticated

voice-card 0

license udi pid CISCO2901/K9 sn FTX1704Y038

license accept end user agreement

license boot module c2900 technology-package securityk9

license boot module c2900 technology-package uck9

vtp domain cisco

vtp mode transparent

redundancy

interface Embedded-Service-Engine0/0

no ip address

shutdown

interface GigabitEthernet0/0

ip address 192.168.2.1 255.255.255.0

duplex auto

speed auto

ipv6 address FE80::1 link-local

ipv6 address 2001:DB8:ACAD:B::1/64

ipv6 ospf 1 area 0

interface GigabitEthernet0/1

ip address 192.168.7.2 255.255.255.0

duplex auto

speed auto

ipv6 address FE80::1 link-local

ipv6 address 2001:DB8:B::2/64

ipv6 ospf 1 area 1

interface Serial0/0/0

no ip address

shutdown

clock rate 2000000

interface Serial0/0/1

no ip address

shutdown

clock rate 2000000

router ospf 1

router-id 1.1.1.1

area 1 stub

network 192.168.2.0 0.0.0.255 area 0

network 192.168.7.0 0.0.0.255 area 1

ip forward-protocol nd

no ip http server

no ip http secure-server

ipv6 router ospf 1

router-id 1.1.1.1

area 1 stub

area 2 stub

control-plane

mgcp profile default

gatekeeper

shutdown

line con 0

line aux 0

line 2

no activation-character

no exec

transport preferred none

transport output pad telnet rlogin lapb-ta mop udptn v120 ssh

stopbits 1

line vty 0 4

login

transport input all

scheduler allocate 20000 1000

end

---------------

R2

---------------

Last configuration change at 21:56:34 UTC Thu Oct 3 2019

version 15.2

service timestamps debug datetime msec

service timestamps log datetime msec

no service password-encryption

hostname R2

boot-start-marker

boot-end-marker

no aaa new-model

memory-size iomem 10

ip cef

ipv6 unicast-routing

ipv6 cef

multilink bundle-name authenticated

voice-card 0

license udi pid CISCO2901/K9 sn FTX15208075

license accept end user agreement

license boot module c2900 technology-package securityk9

license boot module c2900 technology-package uck9

vtp domain cisco

vtp mode transparent

redundancy

interface Embedded-Service-Engine0/0

no ip address

shutdown

interface GigabitEthernet0/0

ip address 192.168.2.4 255.255.255.0

duplex auto

speed auto

ipv6 address FE80::2 link-local

ipv6 address 2001:DB8:ACAD:B::4/64

ipv6 ospf 1 area 0

interface GigabitEthernet0/1

ip address 192.168.6.2 255.255.255.0

duplex auto

speed auto

ipv6 address FE80::2 link-local

ipv6 address 2001:DB8:A::2/64

ipv6 ospf 1 area 2

interface Serial0/0/0

no ip address

shutdown

clock rate 2000000

interface Serial0/0/1

no ip address

shutdown

clock rate 2000000

interface GigabitEthernet0/1/0

no ip address

shutdown

duplex auto

speed auto

router ospf 1

router-id 2.2.2.2

area 2 stub no-summary

network 192.168.2.0 0.0.0.255 area 0

network 192.168.6.0 0.0.0.255 area 2

ip forward-protocol nd

no ip http server

no ip http secure-server

ipv6 router ospf 1

router-id 2.2.2.2

area 2 stub no-summary

control-plane

mgcp profile default

gatekeeper

shutdown

line con 0

line aux 0

line 2

no activation-character

no exec

transport preferred none

transport input all

transport output lat pad telnet rlogin lapb-ta mop udptn v120 ssh

stopbits 1

line vty 0 4

login

transport input all

scheduler allocate 20000 1000

End

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R3

---------------

Last configuration change at 15:33:00 UTC Thu Sep 26 2002

version 15.2

service timestamps debug datetime msec

service timestamps log datetime msec

no service password-encryption

hostname R3

boot-start-marker

boot-end-marker

no aaa new-model

memory-size iomem 10

ip cef

ipv6 unicast-routing

ipv6 cef

multilink bundle-name authenticated

voice-card 0

license udi pid CISCO2901/K9 sn FTX1520806V

license accept end user agreement

license boot module c2900 technology-package securityk9

license boot module c2900 technology-package uck9

vtp domain cisco

vtp mode transparent

redundancy

interface Embedded-Service-Engine0/0

no ip address

shutdown

interface GigabitEthernet0/0

ip address 192.168.2.3 255.255.255.0

duplex auto

speed auto

ipv6 address FE80::3 link-local

ipv6 address 2001:DB8:ACAD:B::3/64

ipv6 ospf 1 area 0

interface GigabitEthernet0/1

ip address 192.168.4.1 255.255.255.0

duplex auto

speed auto

ipv6 address FE80::3 link-local

ipv6 address 2001:DB8:ACAD:D::1/64

ipv6 ospf 1 area 3

interface Serial0/0/0

no ip address

shutdown

clock rate 2000000

interface Serial0/0/1

no ip address

shutdown

clock rate 2000000

interface GigabitEthernet0/1/0

no ip address

shutdown

duplex auto

speed auto

router ospf 1

router-id 3.3.3.3

area 3 nssa

network 192.168.2.0 0.0.0.255 area 0

network 192.168.4.0 0.0.0.255 area 3

ip forward-protocol nd

no ip http server

no ip http secure-server

ipv6 router ospf 1

router-id 3.3.3.3

area 3 nssa

control-plane

mgcp profile default

gatekeeper

shutdown

line con 0

line aux 0

line 2

no activation-character

no exec

transport preferred none

transport input all

transport output lat pad telnet rlogin lapb-ta mop udptn v120 ssh

stopbits 1

line vty 0 4

login

transport input all

scheduler allocate 20000 1000

end

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R4

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Last configuration change at 20:20:45 UTC Thu Oct 3 2019

version 15.2

service timestamps debug datetime msec

service timestamps log datetime msec

no service password-encryption

hostname R4

boot-start-marker

boot-end-marker

no aaa new-model

memory-size iomem 10

ip cef

ipv6 unicast-routing

ipv6 cef

multilink bundle-name authenticated

voice-card 0

license udi pid CISCO2901/K9 sn FTX180180ME

license accept end user agreement

license boot module c2900 technology-package securityk9

license boot module c2900 technology-package uck9

vtp domain cisco

vtp mode transparent

redundancy

interface Embedded-Service-Engine0/0

no ip address

shutdown

interface GigabitEthernet0/0

ip address 192.168.5.1 255.255.255.0

duplex auto

speed auto

ipv6 address FE80::4 link-local

ipv6 address 2001:DB8:ACAD:E::1/64

ipv6 eigrp 1

interface GigabitEthernet0/1

ip address 192.168.4.2 255.255.255.0

duplex auto

speed auto

ipv6 address FE80::4 link-local

ipv6 address 2001:DB8:ACAD:D::2/64

ipv6 ospf 1 area 3

interface Serial0/0/0

no ip address

shutdown

clock rate 2000000

interface Serial0/0/1

no ip address

shutdown

clock rate 2000000

interface GigabitEthernet0/1/0

no ip address

shutdown

duplex auto

speed auto

router eigrp 1

network 192.168.5.0

eigrp router-id 4.4.4.4

router ospf 1

router-id 4.4.4.4

area 3 nssa

redistribute eigrp 1

network 192.168.4.0 0.0.0.255 area 3

ip forward-protocol nd

no ip http server

no ip http secure-server

ip route 0.0.0.0 0.0.0.0 GigabitEthernet0/1

ipv6 router eigrp 1

eigrp router-id 4.4.4.4

redistribute connected metric 100 10 100 1 1500

redistribute ospf 1 metric 100 10 100 1 1500

ipv6 router ospf 1

router-id 4.4.4.4

area 3 nssa

redistribute connected

redistribute eigrp 1

control-plane

mgcp profile default

gatekeeper

shutdown

line con 0

line aux 0

line 2

no activation-character

no exec

transport preferred none

transport output lat pad telnet rlogin lapb-ta mop udptn v120 ssh

stopbits 1

line vty 0 4

login

transport input all

scheduler allocate 20000 1000

end

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R5

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Last configuration change at 20:36:11 UTC Thu Oct 3 2019

version 15.2

service timestamps debug datetime msec

service timestamps log datetime msec

no service password-encryption

hostname R5

boot-start-marker

boot-end-marker

no aaa new-model

memory-size iomem 10

ip cef

ipv6 unicast-routing

ipv6 cef

multilink bundle-name authenticated

voice-card 0

license udi pid CISCO2901/K9 sn FTX180180MA

license accept end user agreement

license boot module c2900 technology-package securityk9

license boot module c2900 technology-package uck9

vtp domain cisco

vtp mode transparent

redundancy

interface Embedded-Service-Engine0/0

no ip address

shutdown

interface GigabitEthernet0/0

no ip address

duplex auto

speed auto

interface GigabitEthernet0/1

ip address 192.168.5.2 255.255.255.0

duplex auto

speed auto

ipv6 address FE80::5 link-local

ipv6 address 2001:DB8:ACAD:E::2/64

ipv6 eigrp 1

interface Serial0/0/0

no ip address

shutdown

clock rate 2000000

interface Serial0/0/1

no ip address

shutdown

clock rate 2000000

router eigrp 1

network 192.168.5.0

eigrp router-id 5.5.5.5

ip forward-protocol nd

no ip http server

no ip http secure-server

ip route 0.0.0.0 0.0.0.0 GigabitEthernet0/1

ip route 192.168.4.2 255.255.255.255 192.168.5.1

ipv6 router eigrp 1

eigrp router-id 5.5.5.5

control-plane

mgcp profile default

gatekeeper

shutdown

line con 0

line aux 0

line 2

no activation-character

no exec

transport preferred none

transport output lat pad telnet rlogin lapb-ta mop udptn v120 ssh

stopbits 1

line vty 0 4

login

transport input all

scheduler allocate 20000 1000

end

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R6

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Last configuration change at 13:08:01 UTC Mon Jan 2 2006

version 15.1

service timestamps debug datetime msec

service timestamps log datetime msec

no service password-encryption

hostname R6

boot-start-marker

boot-end-marker

no aaa new-model

memory-size iomem 10

dot11 syslog

ip source-route

ip cef

ipv6 unicast-routing

ipv6 cef

multilink bundle-name authenticated

voice-card 0

crypto pki token default removal timeout 0

license udi pid CISCO2811 sn FTX1233A58D

vtp domain cisco

vtp mode transparent

redundancy

interface FastEthernet0/0

ip address 192.168.3.2 255.255.255.0

duplex auto

speed auto

ipv6 address FE80::6 link-local

ipv6 address 2001:DB8:ACAD:C::2/64

ipv6 ospf 1 area 2

interface FastEthernet0/1

ip address 192.168.6.1 255.255.255.0

duplex auto

speed auto

ipv6 address FE80::6 link-local

ipv6 address 2001:DB8:A::1/64

ipv6 ospf 1 area 2

interface Serial0/0/0

no ip address

shutdown

no fair-queue

clock rate 2000000

interface Serial0/0/1

no ip address

shutdown

clock rate 2000000

interface Serial0/1/0

no ip address

shutdown

clock rate 2000000

interface Serial0/1/1

no ip address

shutdown

clock rate 2000000

interface FastEthernet0/3/0

no ip address

interface FastEthernet0/3/1

no ip address

interface FastEthernet0/3/2

no ip address

interface FastEthernet0/3/3

no ip address

interface FastEthernet0/3/4

no ip address

interface FastEthernet0/3/5

no ip address

interface FastEthernet0/3/6

no ip address

interface FastEthernet0/3/7

no ip address

interface FastEthernet0/3/8

no ip address

interface Vlan1

no ip address

router ospf 1

router-id 6.6.6.6

area 2 stub no-summary

network 192.168.3.0 0.0.0.255 area 2

network 192.168.6.0 0.0.0.255 area 2

ip forward-protocol nd

no ip http server

no ip http secure-server

ipv6 router ospf 1

router-id 6.6.6.6

area 2 stub no-summary

control-plane

mgcp profile default

line con 0

line aux 0

line vty 0 4

login

transport input all

scheduler allocate 20000 1000

end

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R7

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version 12.4

service timestamps debug datetime msec

service timestamps log datetime msec

no service password-encryption

hostname R7

boot-start-marker

boot-end-marker

logging message-counter syslog

no aaa new-model

memory-size iomem 10

dot11 syslog

ip source-route

ip cef

ipv6 unicast-routing

ipv6 cef

multilink bundle-name authenticated

voice-card 0

no dspfarm

vtp domain cisco

vtp mode transparent

archive

log config

hidekey

interface FastEthernet0/0

ip address 192.168.1.2 255.255.255.0

duplex auto

speed auto

ipv6 address FE80::7 link-local

ipv6 address 2001:DB8:ACAD:A::2/64

ipv6 ospf 1 area 1

interface FastEthernet0/1

ip address 192.168.7.1 255.255.255.0

duplex auto

speed auto

ipv6 address FE80::7 link-local

ipv6 address 2001:DB8:B::1/64

ipv6 ospf 1 area 1

interface FastEthernet0/3/0

interface FastEthernet0/3/1

interface FastEthernet0/3/2

interface FastEthernet0/3/3

interface Serial0/0/0

no ip address

shutdown

no fair-queue

clock rate 2000000

interface Serial0/0/1

no ip address

shutdown

clock rate 2000000

interface Vlan1

no ip address

router ospf 1

router-id 7.7.7.7

log-adjacency-changes

area 1 stub

network 192.168.1.0 0.0.0.255 area 1

network 192.168.7.0 0.0.0.255 area 1

ip forward-protocol nd

no ip http server

no ip http secure-server

ipv6 router ospf 1

router-id 7.7.7.7

log-adjacency-changes

area 1 stub

control-plane

voice-port 0/1/0

voice-port 0/1/1

voice-port 0/2/0

voice-port 0/2/1

line con 0

line aux 0

line vty 0 4

login

scheduler allocate 20000 1000

end

Pings and Traceroutes

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PC-1 -> PC-2 and R5

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C:\Users\cisco>ping 192.168.3.2

Pinging 192.168.3.2 with 32 bytes of data:

Reply from 192.168.3.2: bytes=32 time=1ms TTL=252

Reply from 192.168.3.2: bytes=32 time=1ms TTL=252

Reply from 192.168.3.2: bytes=32 time=1ms TTL=252

Reply from 192.168.3.2: bytes=32 time=1ms TTL=252

Ping statistics for 192.168.3.2:

Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),

Approximate round trip times in milli-seconds:

Minimum = 1ms, Maximum = 1ms, Average = 1ms

C:\Users\cisco>ping 192.168.5.2

Pinging 192.168.5.2 with 32 bytes of data:

Reply from 192.168.5.2: bytes=32 time=1ms TTL=251

Reply from 192.168.5.2: bytes=32 time=1ms TTL=251

Reply from 192.168.5.2: bytes=32 time=1ms TTL=251

Reply from 192.168.5.2: bytes=32 time=1ms TTL=251

Ping statistics for 192.168.5.2:

Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),

Approximate round trip times in milli-seconds:

Minimum = 1ms, Maximum = 1ms, Average = 1ms

C:\Users\cisco>ping 2001:db8:acad:c::2

Pinging 2001:db8:acad:c::2 with 32 bytes of data:

Reply from 2001:db8:acad:c::2: time=1ms

Reply from 2001:db8:acad:c::2: time=1ms

Reply from 2001:db8:acad:c::2: time=1ms

Reply from 2001:db8:acad:c::2: time=1ms

Ping statistics for 2001:db8:acad:c::2:

Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),

Approximate round trip times in milli-seconds:

Minimum = 1ms, Maximum = 1ms, Average = 1ms

C:\Users\cisco>ping 2001:db8:acad:e::2

Pinging 2001:db8:acad:e::2 with 32 bytes of data:

Reply from 2001:db8:acad:e::2: time=1ms

Reply from 2001:db8:acad:e::2: time=1ms

Reply from 2001:db8:acad:e::2: time=1ms

Reply from 2001:db8:acad:e::2: time=1ms

Ping statistics for 2001:db8:acad:e::2:

Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),

Approximate round trip times in milli-seconds:

Minimum = 1ms, Maximum = 1ms, Average = 1ms

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PC-2 -> PC-1 and R5

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C:\Users\cisco>ping 192.168.1.1

Pinging 192.168.1.1 with 32 bytes of data:

Reply from 192.168.1.1: bytes=32 time=1ms TTL=124

Reply from 192.168.1.1: bytes=32 time=1ms TTL=124

Reply from 192.168.1.1: bytes=32 time=1ms TTL=124

Reply from 192.168.1.1: bytes=32 time=1ms TTL=124

Ping statistics for 192.168.1.1:

Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),

Approximate round trip times in milli-seconds:

Minimum = 1ms, Maximum = 1ms, Average = 1ms

C:\Users\cisco>ping 2001:db8:acad:a::1

Pinging 2001:db8:acad:a::1 with 32 bytes of data:

Reply from 2001:db8:acad:a::1: time=4ms

Reply from 2001:db8:acad:a::1: time=1ms

Reply from 2001:db8:acad:a::1: time=1ms

Reply from 2001:db8:acad:a::1: time=1ms

Ping statistics for 2001:db8:acad:a::1:

Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),

Approximate round trip times in milli-seconds:

Minimum = 1ms, Maximum = 4ms, Average = 1ms

C:\Users\cisco>ping 192.168.5.2

Pinging 192.168.5.2 with 32 bytes of data:

Reply from 192.168.5.2: bytes=32 time=1ms TTL=251

Reply from 192.168.5.2: bytes=32 time=1ms TTL=251

Reply from 192.168.5.2: bytes=32 time=1ms TTL=251

Reply from 192.168.5.2: bytes=32 time=1ms TTL=251

Ping statistics for 192.168.5.2:

Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),

Approximate round trip times in milli-seconds:

Minimum = 1ms, Maximum = 1ms, Average = 1ms

C:\Users\cisco>ping 2001:db8:acad:e::2

Pinging 2001:db8:acad:e::2 with 32 bytes of data:

Reply from 2001:db8:acad:e::2: time=1ms

Reply from 2001:db8:acad:e::2: time=1ms

Reply from 2001:db8:acad:e::2: time=1ms

Reply from 2001:db8:acad:e::2: time=1ms

Ping statistics for 2001:db8:acad:e::2:

Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),

Approximate round trip times in milli-seconds:

Minimum = 1ms, Maximum = 1ms, Average = 1ms

C:\Users\cisco>tracert 192.168.1.1

Tracing route to 192.168.1.1 over a maximum of 30 hops

1 1 ms <1 ms <1 ms 192.168.3.2

2 <1 ms <1 ms <1 ms 192.168.6.2

3 1 ms <1 ms <1 ms 192.168.2.1

4 1 ms 1 ms 1 ms 192.168.7.1

5 1 ms 1 ms 1 ms 192.168.1.1

Trace complete.

C:\Users\cisco>tracert 2001:db8:acad:a::1

Tracing route to 2001:db8:acad:a::1 over a maximum of 30 hops

1 <1 ms <1 ms <1 ms 2001:db8:acad:c::2

2 <1 ms <1 ms <1 ms 2001:db8:a::2

3 1 ms <1 ms <1 ms 2001:db8:acad:b::1

4 1 ms 1 ms 1 ms 2001:db8:b::1

5 1 ms 1 ms 1 ms 2001:db8:acad:a::1

Trace complete.

C:\Users\cisco>tracert 192.168.5.2

Tracing route to 192.168.5.2 over a maximum of 30 hops

1 <1 ms <1 ms <1 ms 192.168.3.2

2 1 ms <1 ms <1 ms 192.168.6.2

3 <1 ms <1 ms <1 ms 192.168.2.3

4 1 ms 1 ms <1 ms 192.168.4.2

5 1 ms 1 ms 1 ms 192.168.5.2

Trace complete.

C:\Users\cisco>tracert 2001:db8:acad:e::2

Tracing route to 2001:db8:acad:e::2 over a maximum of 30 hops

1 <1 ms <1 ms <1 ms 2001:db8:acad:c::2

2 <1 ms <1 ms <1 ms 2001:db8:a::2

3 1 ms <1 ms <1 ms 2001:db8:acad:b::3

4 1 ms 1 ms 1 ms 2001:db8:acad:d::2

5 1 ms 1 ms 1 ms 2001:db8:acad:e::2

Trace complete.

OSPF and OSPFv3 Databases

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R1

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R1#show ip ospf database

OSPF Router with ID (1.1.1.1) (Process ID 1)

Router Link States (Area 0)

Link ID ADV Router Age Seq# Checksum Link count

1.1.1.1 1.1.1.1 1250 0x80000004 0x00AF9C 1

2.2.2.2 2.2.2.2 1341 0x80000004 0x008DB3 1

3.3.3.3 3.3.3.3 1070 0x80000005 0x0037FF 1

Net Link States (Area 0)

Link ID ADV Router Age Seq# Checksum

192.168.2.3 3.3.3.3 1251 0x80000002 0x008220

Summary Net Link States (Area 0)

Link ID ADV Router Age Seq# Checksum

192.168.1.0 1.1.1.1 1230 0x80000001 0x00C20A

192.168.3.0 2.2.2.2 983 0x80000001 0x008E38

192.168.4.0 3.3.3.3 1061 0x80000001 0x005B67

192.168.6.0 2.2.2.2 1367 0x80000001 0x006361

192.168.7.0 1.1.1.1 1272 0x80000001 0x007651

Router Link States (Area 1)

Link ID ADV Router Age Seq# Checksum Link count

1.1.1.1 1.1.1.1 1240 0x80000003 0x00380E 1

7.7.7.7 7.7.7.7 1241 0x80000005 0x007723 2

Net Link States (Area 1)

Link ID ADV Router Age Seq# Checksum

192.168.7.1 7.7.7.7 1241 0x80000001 0x00038B

Summary Net Link States (Area 1)

Link ID ADV Router Age Seq# Checksum

0.0.0.0 1.1.1.1 1282 0x80000001 0x0093A6

192.168.2.0 1.1.1.1 1282 0x80000001 0x00CB03

192.168.3.0 1.1.1.1 982 0x80000001 0x00D4F6

192.168.4.0 1.1.1.1 1060 0x80000001 0x00BF0C

192.168.6.0 1.1.1.1 1245 0x80000001 0x00A920

Type-5 AS External Link States

Link ID ADV Router Age Seq# Checksum Tag

192.168.5.0 3.3.3.3 1020 0x80000001 0x002591 0

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R2

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R2#show ip ospf database

OSPF Router with ID (2.2.2.2) (Process ID 1)

Router Link States (Area 0)

Link ID ADV Router Age Seq# Checksum Link count

1.1.1.1 1.1.1.1 1185 0x80000004 0x00AF9C 1

2.2.2.2 2.2.2.2 1275 0x80000004 0x008DB3 1

3.3.3.3 3.3.3.3 1004 0x80000005 0x0037FF 1

Net Link States (Area 0)

Link ID ADV Router Age Seq# Checksum

192.168.2.3 3.3.3.3 1185 0x80000002 0x008220

Summary Net Link States (Area 0)

Link ID ADV Router Age Seq# Checksum

192.168.1.0 1.1.1.1 1166 0x80000001 0x00C20A

192.168.3.0 2.2.2.2 917 0x80000001 0x008E38

192.168.4.0 3.3.3.3 995 0x80000001 0x005B67

192.168.6.0 2.2.2.2 1301 0x80000001 0x006361

192.168.7.0 1.1.1.1 1208 0x80000001 0x007651

Router Link States (Area 2)

Link ID ADV Router Age Seq# Checksum Link count

2.2.2.2 2.2.2.2 1244 0x80000003 0x00DF5F 1

6.6.6.6 6.6.6.6 923 0x80000006 0x00DFC0 2

Net Link States (Area 2)

Link ID ADV Router Age Seq# Checksum

192.168.6.2 2.2.2.2 1244 0x80000001 0x00EAB7

Summary Net Link States (Area 2)

Link ID ADV Router Age Seq# Checksum

0.0.0.0 2.2.2.2 1302 0x80000001 0x0075C0

Type-5 AS External Link States

Link ID ADV Router Age Seq# Checksum Tag

192.168.5.0 3.3.3.3 954 0x80000001 0x002591 0

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R3

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R3#show ip ospf database

OSPF Router with ID (3.3.3.3) (Process ID 1)

Router Link States (Area 0)

Link ID ADV Router Age Seq# Checksum Link count

1.1.1.1 1.1.1.1 1298 0x80000004 0x00AF9C 1

2.2.2.2 2.2.2.2 1388 0x80000004 0x008DB3 1

3.3.3.3 3.3.3.3 1116 0x80000005 0x0037FF 1

Net Link States (Area 0)

Link ID ADV Router Age Seq# Checksum

192.168.2.3 3.3.3.3 1296 0x80000002 0x008220

Summary Net Link States (Area 0)

Link ID ADV Router Age Seq# Checksum

192.168.1.0 1.1.1.1 1278 0x80000001 0x00C20A

192.168.3.0 2.2.2.2 1030 0x80000001 0x008E38

192.168.4.0 3.3.3.3 1106 0x80000001 0x005B67

192.168.6.0 2.2.2.2 1414 0x80000001 0x006361

192.168.7.0 1.1.1.1 1320 0x80000001 0x007651

Router Link States (Area 3)

Link ID ADV Router Age Seq# Checksum Link count

3.3.3.3 3.3.3.3 1071 0x80000007 0x00DE4F 1

4.4.4.4 4.4.4.4 1072 0x80000008 0x009B89 1

Net Link States (Area 3)

Link ID ADV Router Age Seq# Checksum

192.168.4.2 4.4.4.4 1068 0x80000003 0x00F5A0

Summary Net Link States (Area 3)

Link ID ADV Router Age Seq# Checksum

192.168.1.0 3.3.3.3 1116 0x80000001 0x003687

192.168.2.0 3.3.3.3 1116 0x80000001 0x0017A7

192.168.3.0 3.3.3.3 1029 0x80000001 0x00209B

192.168.6.0 3.3.3.3 1116 0x80000001 0x00F4C4

192.168.7.0 3.3.3.3 1116 0x80000001 0x00E9CE

Type-7 AS External Link States (Area 3)

Link ID ADV Router Age Seq# Checksum Tag

192.168.5.0 4.4.4.4 1112 0x80000006 0x00683B 0

Type-5 AS External Link States

Link ID ADV Router Age Seq# Checksum Tag

192.168.5.0 3.3.3.3 1066 0x80000001 0x002591 0

OSPF and EIGRP

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R4

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R4#show ip ospf database

OSPF Router with ID (4.4.4.4) (Process ID 1)

Router Link States (Area 3)

Link ID ADV Router Age Seq# Checksum Link count

3.3.3.3 3.3.3.3 1097 0x80000007 0x00DE4F 1

4.4.4.4 4.4.4.4 1096 0x80000008 0x009B89 1

Net Link States (Area 3)

Link ID ADV Router Age Seq# Checksum

192.168.4.2 4.4.4.4 1092 0x80000003 0x00F5A0

Summary Net Link States (Area 3)

Link ID ADV Router Age Seq# Checksum

192.168.1.0 3.3.3.3 1303 0x80000001 0x003687

192.168.2.0 3.3.3.3 1489 0x80000001 0x0017A7

192.168.3.0 3.3.3.3 1055 0x80000001 0x00209B

192.168.6.0 3.3.3.3 1409 0x80000001 0x00F4C4

192.168.7.0 3.3.3.3 1318 0x80000001 0x00E9CE

Type-7 AS External Link States (Area 3)

Link ID ADV Router Age Seq# Checksum Tag

192.168.5.0 4.4.4.4 1137 0x80000006 0x00683B 0

R4#show ip eigrp 1 neighbors

EIGRP-IPv4 Neighbors for AS(1)

H Address Interface Hold Uptime SRTT RTO Q Seq

(sec) (ms) Cnt Num

0 192.168.5.2 Gi0/0 13 00:27:19 1 100 0 1

Only EIGRP

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R5

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R5#show ip eigrp 1 neighbors

EIGRP-IPv4 Neighbors for AS(1)

H Address Interface Hold Uptime SRTT RTO Q Seq

(sec) (ms) Cnt Num

0 192.168.5.1 Gi0/1 11 00:27:49 1 100 0 1

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R6

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R6#show ip ospf database

OSPF Router with ID (6.6.6.6) (Process ID 1)

Router Link States (Area 2)

Link ID ADV Router Age Seq# Checksum Link count

2.2.2.2 2.2.2.2 1549 0x80000003 0x00DF5F 1

6.6.6.6 6.6.6.6 1225 0x80000006 0x00DFC0 2

Net Link States (Area 2)

Link ID ADV Router Age Seq# Checksum

192.168.6.2 2.2.2.2 1549 0x80000001 0x00EAB7

Summary Net Link States (Area 2)

Link ID ADV Router Age Seq# Checksum

0.0.0.0 2.2.2.2 1606 0x80000001 0x0075C0

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R7

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R7#show ip ospf database

OSPF Router with ID (7.7.7.7) (Process ID 1)

Router Link States (Area 1)

Link ID ADV Router Age Seq# Checksum Link count

1.1.1.1 1.1.1.1 1591 0x80000003 0x00380E 1

7.7.7.7 7.7.7.7 1590 0x80000005 0x007723 2

Net Link States (Area 1)

Link ID ADV Router Age Seq# Checksum

192.168.7.1 7.7.7.7 1590 0x80000001 0x00038B

Summary Net Link States (Area 1)

Link ID ADV Router Age Seq# Checksum

0.0.0.0 1.1.1.1 1633 0x80000001 0x0093A6

192.168.2.0 1.1.1.1 1633 0x80000001 0x00CB03

192.168.3.0 1.1.1.1 1333 0x80000001 0x00D4F6

192.168.4.0 1.1.1.1 1410 0x80000001 0x00BF0C

192.168.6.0 1.1.1.1 1596 0x80000001 0x00A920

IPv4 and IPv6 Routing Tables

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R1

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R1#show ip route

Codes: L - local, C - connected, S - static, R - RIP, M - mobile, B - BGP

D - EIGRP, EX - EIGRP external, O - OSPF, IA - OSPF inter area

N1 - OSPF NSSA external type 1, N2 - OSPF NSSA external type 2

E1 - OSPF external type 1, E2 - OSPF external type 2

i - IS-IS, su - IS-IS summary, L1 - IS-IS level-1, L2 - IS-IS level-2

ia - IS-IS inter area, \* - candidate default, U - per-user static route

o - ODR, P - periodic downloaded static route, H - NHRP, l - LISP

+ - replicated route, % - next hop override

Gateway of last resort is not set

O 192.168.1.0/24 [110/2] via 192.168.7.1, 00:27:48, GigabitEthernet0/1

192.168.2.0/24 is variably subnetted, 2 subnets, 2 masks

C 192.168.2.0/24 is directly connected, GigabitEthernet0/0

L 192.168.2.1/32 is directly connected, GigabitEthernet0/0

O IA 192.168.3.0/24 [110/3] via 192.168.2.4, 00:23:41, GigabitEthernet0/0

O IA 192.168.4.0/24 [110/2] via 192.168.2.3, 00:24:58, GigabitEthernet0/0

O E2 192.168.5.0/24 [110/20] via 192.168.2.3, 00:24:17, GigabitEthernet0/0

O IA 192.168.6.0/24 [110/2] via 192.168.2.4, 00:28:03, GigabitEthernet0/0

192.168.7.0/24 is variably subnetted, 2 subnets, 2 masks

C 192.168.7.0/24 is directly connected, GigabitEthernet0/1

L 192.168.7.2/32 is directly connected, GigabitEthernet0/1

R1#show ipv6 route

IPv6 Routing Table - default - 10 entries

Codes: C - Connected, L - Local, S - Static, U - Per-user Static route

B - BGP, R - RIP, H - NHRP, I1 - ISIS L1

I2 - ISIS L2, IA - ISIS interarea, IS - ISIS summary, D - EIGRP

EX - EIGRP external, ND - ND Default, NDp - ND Prefix, DCE - Destination

NDr - Redirect, O - OSPF Intra, OI - OSPF Inter, OE1 - OSPF ext 1

OE2 - OSPF ext 2, ON1 - OSPF NSSA ext 1, ON2 - OSPF NSSA ext 2

OI 2001:DB8:A::/64 [110/2]

via FE80::2, GigabitEthernet0/0

C 2001:DB8:B::/64 [0/0]

via GigabitEthernet0/1, directly connected

L 2001:DB8:B::2/128 [0/0]

via GigabitEthernet0/1, receive

O 2001:DB8:ACAD:A::/64 [110/2]

via FE80::7, GigabitEthernet0/1

C 2001:DB8:ACAD:B::/64 [0/0]

via GigabitEthernet0/0, directly connected

L 2001:DB8:ACAD:B::1/128 [0/0]

via GigabitEthernet0/0, receive

OI 2001:DB8:ACAD:C::/64 [110/3]

via FE80::2, GigabitEthernet0/0

OI 2001:DB8:ACAD:D::/64 [110/2]

via FE80::3, GigabitEthernet0/0

OE2 2001:DB8:ACAD:E::/64 [110/20]

via FE80::3, GigabitEthernet0/0

L FF00::/8 [0/0]

via Null0, receive

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R2

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R2#show ip route

Codes: L - local, C - connected, S - static, R - RIP, M - mobile, B - BGP

D - EIGRP, EX - EIGRP external, O - OSPF, IA - OSPF inter area

N1 - OSPF NSSA external type 1, N2 - OSPF NSSA external type 2

E1 - OSPF external type 1, E2 - OSPF external type 2

i - IS-IS, su - IS-IS summary, L1 - IS-IS level-1, L2 - IS-IS level-2

ia - IS-IS inter area, \* - candidate default, U - per-user static route

o - ODR, P - periodic downloaded static route, H - NHRP, l - LISP

+ - replicated route, % - next hop override

Gateway of last resort is not set

O IA 192.168.1.0/24 [110/3] via 192.168.2.1, 00:28:34, GigabitEthernet0/0

192.168.2.0/24 is variably subnetted, 2 subnets, 2 masks

C 192.168.2.0/24 is directly connected, GigabitEthernet0/0

L 192.168.2.4/32 is directly connected, GigabitEthernet0/0

O 192.168.3.0/24 [110/2] via 192.168.6.1, 00:24:26, GigabitEthernet0/1

O IA 192.168.4.0/24 [110/2] via 192.168.2.3, 00:25:44, GigabitEthernet0/0

O E2 192.168.5.0/24 [110/20] via 192.168.2.3, 00:25:03, GigabitEthernet0/0

192.168.6.0/24 is variably subnetted, 2 subnets, 2 masks

C 192.168.6.0/24 is directly connected, GigabitEthernet0/1

L 192.168.6.2/32 is directly connected, GigabitEthernet0/1

O IA 192.168.7.0/24 [110/2] via 192.168.2.1, 00:28:49, GigabitEthernet0/0

R2#show ipv6 route

IPv6 Routing Table - default - 10 entries

Codes: C - Connected, L - Local, S - Static, U - Per-user Static route

B - BGP, HA - Home Agent, MR - Mobile Router, R - RIP

H - NHRP, I1 - ISIS L1, I2 - ISIS L2, IA - ISIS interarea

IS - ISIS summary, D - EIGRP, EX - EIGRP external, NM - NEMO

ND - ND Default, NDp - ND Prefix, DCE - Destination, NDr - Redirect

O - OSPF Intra, OI - OSPF Inter, OE1 - OSPF ext 1, OE2 - OSPF ext 2

ON1 - OSPF NSSA ext 1, ON2 - OSPF NSSA ext 2, l - LISP

C 2001:DB8:A::/64 [0/0]

via GigabitEthernet0/1, directly connected

L 2001:DB8:A::2/128 [0/0]

via GigabitEthernet0/1, receive

OI 2001:DB8:B::/64 [110/2]

via FE80::1, GigabitEthernet0/0

OI 2001:DB8:ACAD:A::/64 [110/3]

via FE80::1, GigabitEthernet0/0

C 2001:DB8:ACAD:B::/64 [0/0]

via GigabitEthernet0/0, directly connected

L 2001:DB8:ACAD:B::4/128 [0/0]

via GigabitEthernet0/0, receive

O 2001:DB8:ACAD:C::/64 [110/2]

via FE80::6, GigabitEthernet0/1

OI 2001:DB8:ACAD:D::/64 [110/2]

via FE80::3, GigabitEthernet0/0

OE2 2001:DB8:ACAD:E::/64 [110/20]

via FE80::3, GigabitEthernet0/0

L FF00::/8 [0/0]

via Null0, receive

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R3

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R3#show ip route

Codes: L - local, C - connected, S - static, R - RIP, M - mobile, B - BGP

D - EIGRP, EX - EIGRP external, O - OSPF, IA - OSPF inter area

N1 - OSPF NSSA external type 1, N2 - OSPF NSSA external type 2

E1 - OSPF external type 1, E2 - OSPF external type 2

i - IS-IS, su - IS-IS summary, L1 - IS-IS level-1, L2 - IS-IS level-2

ia - IS-IS inter area, \* - candidate default, U - per-user static route

o - ODR, P - periodic downloaded static route, H - NHRP, l - LISP

+ - replicated route, % - next hop override

Gateway of last resort is not set

O IA 192.168.1.0/24 [110/3] via 192.168.2.1, 00:00:09, GigabitEthernet0/0

192.168.2.0/24 is variably subnetted, 2 subnets, 2 masks

C 192.168.2.0/24 is directly connected, GigabitEthernet0/0

L 192.168.2.3/32 is directly connected, GigabitEthernet0/0

O IA 192.168.3.0/24 [110/3] via 192.168.2.4, 00:00:09, GigabitEthernet0/0

192.168.4.0/24 is variably subnetted, 2 subnets, 2 masks

C 192.168.4.0/24 is directly connected, GigabitEthernet0/1

L 192.168.4.1/32 is directly connected, GigabitEthernet0/1

O IA 192.168.6.0/24 [110/2] via 192.168.2.4, 00:00:09, GigabitEthernet0/0

O IA 192.168.7.0/24 [110/2] via 192.168.2.1, 00:00:09, GigabitEthernet0/0

R3#show ipv6 route

IPv6 Routing Table - default - 9 entries

Codes: C - Connected, L - Local, S - Static, U - Per-user Static route

B - BGP, HA - Home Agent, MR - Mobile Router, R - RIP

H - NHRP, I1 - ISIS L1, I2 - ISIS L2, IA - ISIS interarea

IS - ISIS summary, D - EIGRP, EX - EIGRP external, NM - NEMO

ND - ND Default, NDp - ND Prefix, DCE - Destination, NDr - Redirect

O - OSPF Intra, OI - OSPF Inter, OE1 - OSPF ext 1, OE2 - OSPF ext 2

ON1 - OSPF NSSA ext 1, ON2 - OSPF NSSA ext 2, l - LISP

OI 2001:DB8:A::/64 [110/2]

via FE80::2, GigabitEthernet0/0

OI 2001:DB8:B::/64 [110/2]

via FE80::1, GigabitEthernet0/0

OI 2001:DB8:ACAD:A::/64 [110/3]

via FE80::1, GigabitEthernet0/0

C 2001:DB8:ACAD:B::/64 [0/0]

via GigabitEthernet0/0, directly connected

L 2001:DB8:ACAD:B::3/128 [0/0]

via GigabitEthernet0/0, receive

OI 2001:DB8:ACAD:C::/64 [110/3]

via FE80::2, GigabitEthernet0/0

C 2001:DB8:ACAD:D::/64 [0/0]

via GigabitEthernet0/1, directly connected

L 2001:DB8:ACAD:D::1/128 [0/0]

via GigabitEthernet0/1, receive

L FF00::/8 [0/0]

via Null0, receive

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R4

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R4#show ip route

Codes: L - local, C - connected, S - static, R - RIP, M - mobile, B - BGP

D - EIGRP, EX - EIGRP external, O - OSPF, IA - OSPF inter area

N1 - OSPF NSSA external type 1, N2 - OSPF NSSA external type 2

E1 - OSPF external type 1, E2 - OSPF external type 2

i - IS-IS, su - IS-IS summary, L1 - IS-IS level-1, L2 - IS-IS level-2

ia - IS-IS inter area, \* - candidate default, U - per-user static route

o - ODR, P - periodic downloaded static route, H - NHRP, l - LISP

+ - replicated route, % - next hop override

Gateway of last resort is 0.0.0.0 to network 0.0.0.0

S\* 0.0.0.0/0 is directly connected, GigabitEthernet0/1

O IA 192.168.1.0/24 [110/4] via 192.168.4.1, 00:00:02, GigabitEthernet0/1

O IA 192.168.2.0/24 [110/2] via 192.168.4.1, 00:00:02, GigabitEthernet0/1

O IA 192.168.3.0/24 [110/4] via 192.168.4.1, 00:00:02, GigabitEthernet0/1

192.168.4.0/24 is variably subnetted, 2 subnets, 2 masks

C 192.168.4.0/24 is directly connected, GigabitEthernet0/1

L 192.168.4.2/32 is directly connected, GigabitEthernet0/1

192.168.5.0/24 is variably subnetted, 2 subnets, 2 masks

C 192.168.5.0/24 is directly connected, GigabitEthernet0/0

L 192.168.5.1/32 is directly connected, GigabitEthernet0/0

O IA 192.168.6.0/24 [110/3] via 192.168.4.1, 00:00:02, GigabitEthernet0/1

O IA 192.168.7.0/24 [110/3] via 192.168.4.1, 00:00:02, GigabitEthernet0/1

R4#show ipv6 route

IPv6 Routing Table - default - 10 entries

Codes: C - Connected, L - Local, S - Static, U - Per-user Static route

B - BGP, HA - Home Agent, MR - Mobile Router, R - RIP

H - NHRP, I1 - ISIS L1, I2 - ISIS L2, IA - ISIS interarea

IS - ISIS summary, D - EIGRP, EX - EIGRP external, NM - NEMO

ND - ND Default, NDp - ND Prefix, DCE - Destination, NDr - Redirect

O - OSPF Intra, OI - OSPF Inter, OE1 - OSPF ext 1, OE2 - OSPF ext 2

ON1 - OSPF NSSA ext 1, ON2 - OSPF NSSA ext 2, l - LISP

OI 2001:DB8:A::/64 [110/3]

via FE80::3, GigabitEthernet0/1

OI 2001:DB8:B::/64 [110/3]

via FE80::3, GigabitEthernet0/1

OI 2001:DB8:ACAD:A::/64 [110/4]

via FE80::3, GigabitEthernet0/1

OI 2001:DB8:ACAD:B::/64 [110/2]

via FE80::3, GigabitEthernet0/1

OI 2001:DB8:ACAD:C::/64 [110/4]

via FE80::3, GigabitEthernet0/1

C 2001:DB8:ACAD:D::/64 [0/0]

via GigabitEthernet0/1, directly connected

L 2001:DB8:ACAD:D::2/128 [0/0]

via GigabitEthernet0/1, receive

C 2001:DB8:ACAD:E::/64 [0/0]

via GigabitEthernet0/0, directly connected

L 2001:DB8:ACAD:E::1/128 [0/0]

via GigabitEthernet0/0, receive

L FF00::/8 [0/0]

via Null0, receive

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R5

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R5#show ip route

Codes: L - local, C - connected, S - static, R - RIP, M - mobile, B - BGP

D - EIGRP, EX - EIGRP external, O - OSPF, IA - OSPF inter area

N1 - OSPF NSSA external type 1, N2 - OSPF NSSA external type 2

E1 - OSPF external type 1, E2 - OSPF external type 2

i - IS-IS, su - IS-IS summary, L1 - IS-IS level-1, L2 - IS-IS level-2

ia - IS-IS inter area, \* - candidate default, U - per-user static route

o - ODR, P - periodic downloaded static route, H - NHRP, l - LISP

+ - replicated route, % - next hop override

Gateway of last resort is 0.0.0.0 to network 0.0.0.0

S\* 0.0.0.0/0 is directly connected, GigabitEthernet0/1

192.168.4.0/32 is subnetted, 1 subnets

S 192.168.4.2 [1/0] via 192.168.5.1

192.168.5.0/24 is variably subnetted, 2 subnets, 2 masks

C 192.168.5.0/24 is directly connected, GigabitEthernet0/1

L 192.168.5.2/32 is directly connected, GigabitEthernet0/1

R5#show ipv6 route

IPv6 Routing Table - default - 9 entries

Codes: C - Connected, L - Local, S - Static, U - Per-user Static route

B - BGP, HA - Home Agent, MR - Mobile Router, R - RIP

H - NHRP, I1 - ISIS L1, I2 - ISIS L2, IA - ISIS interarea

IS - ISIS summary, D - EIGRP, EX - EIGRP external, NM - NEMO

ND - ND Default, NDp - ND Prefix, DCE - Destination, NDr - Redirect

O - OSPF Intra, OI - OSPF Inter, OE1 - OSPF ext 1, OE2 - OSPF ext 2

ON1 - OSPF NSSA ext 1, ON2 - OSPF NSSA ext 2, l - LISP

EX 2001:DB8:A::/64 [170/25602816]

via FE80::4, GigabitEthernet0/1

EX 2001:DB8:B::/64 [170/25602816]

via FE80::4, GigabitEthernet0/1

EX 2001:DB8:ACAD:A::/64 [170/25602816]

via FE80::4, GigabitEthernet0/1

EX 2001:DB8:ACAD:B::/64 [170/25602816]

via FE80::4, GigabitEthernet0/1

EX 2001:DB8:ACAD:C::/64 [170/25602816]

via FE80::4, GigabitEthernet0/1

EX 2001:DB8:ACAD:D::/64 [170/25602816]

via FE80::4, GigabitEthernet0/1

C 2001:DB8:ACAD:E::/64 [0/0]

via GigabitEthernet0/1, directly connected

L 2001:DB8:ACAD:E::2/128 [0/0]

via GigabitEthernet0/1, receive

L FF00::/8 [0/0]

via Null0, receive

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R6

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R6#show ip route

Codes: L - local, C - connected, S - static, R - RIP, M - mobile, B - BGP

D - EIGRP, EX - EIGRP external, O - OSPF, IA - OSPF inter area

N1 - OSPF NSSA external type 1, N2 - OSPF NSSA external type 2

E1 - OSPF external type 1, E2 - OSPF external type 2

i - IS-IS, su - IS-IS summary, L1 - IS-IS level-1, L2 - IS-IS level-2

ia - IS-IS inter area, \* - candidate default, U - per-user static route

o - ODR, P - periodic downloaded static route, H - NHRP, l - LISP

+ - replicated route, % - next hop override

Gateway of last resort is 192.168.6.2 to network 0.0.0.0

O\*IA 0.0.0.0/0 [110/2] via 192.168.6.2, 00:26:08, FastEthernet0/1

192.168.3.0/24 is variably subnetted, 2 subnets, 2 masks

C 192.168.3.0/24 is directly connected, FastEthernet0/0

L 192.168.3.2/32 is directly connected, FastEthernet0/0

192.168.6.0/24 is variably subnetted, 2 subnets, 2 masks

C 192.168.6.0/24 is directly connected, FastEthernet0/1

L 192.168.6.1/32 is directly connected, FastEthernet0/1

R6#show ipv6 route

IPv6 Routing Table - default - 6 entries

Codes: C - Connected, L - Local, S - Static, U - Per-user Static route

B - BGP, HA - Home Agent, MR - Mobile Router, R - RIP

I1 - ISIS L1, I2 - ISIS L2, IA - ISIS interarea, IS - ISIS summary

D - EIGRP, EX - EIGRP external, NM - NEMO, ND - Neighbor Discovery

l - LISP

O - OSPF Intra, OI - OSPF Inter, OE1 - OSPF ext 1, OE2 - OSPF ext 2

ON1 - OSPF NSSA ext 1, ON2 - OSPF NSSA ext 2

OI ::/0 [110/2]

via FE80::2, FastEthernet0/1

C 2001:DB8:A::/64 [0/0]

via FastEthernet0/1, directly connected

L 2001:DB8:A::1/128 [0/0]

via FastEthernet0/1, receive

C 2001:DB8:ACAD:C::/64 [0/0]

via FastEthernet0/0, directly connected

L 2001:DB8:ACAD:C::2/128 [0/0]

via FastEthernet0/0, receive

L FF00::/8 [0/0]

via Null0, receive

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R7

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R7#show ip route

Codes: C - connected, S - static, R - RIP, M - mobile, B - BGP

D - EIGRP, EX - EIGRP external, O - OSPF, IA - OSPF inter area

N1 - OSPF NSSA external type 1, N2 - OSPF NSSA external type 2

E1 - OSPF external type 1, E2 - OSPF external type 2

i - IS-IS, su - IS-IS summary, L1 - IS-IS level-1, L2 - IS-IS level-2

ia - IS-IS inter area, \* - candidate default, U - per-user static route

o - ODR, P - periodic downloaded static route

Gateway of last resort is 192.168.7.2 to network 0.0.0.0

O IA 192.168.4.0/24 [110/3] via 192.168.7.2, 00:23:57, FastEthernet0/1

O IA 192.168.6.0/24 [110/3] via 192.168.7.2, 00:26:53, FastEthernet0/1

C 192.168.7.0/24 is directly connected, FastEthernet0/1

C 192.168.1.0/24 is directly connected, FastEthernet0/0

O IA 192.168.2.0/24 [110/2] via 192.168.7.2, 00:26:53, FastEthernet0/1

O IA 192.168.3.0/24 [110/4] via 192.168.7.2, 00:22:40, FastEthernet0/1

O\*IA 0.0.0.0/0 [110/2] via 192.168.7.2, 00:26:53, FastEthernet0/1

R7#show ipv6 route

IPv6 Routing Table - Default - 10 entries

Codes: C - Connected, L - Local, S - Static, U - Per-user Static route

B - BGP, M - MIPv6, R - RIP, I1 - ISIS L1

I2 - ISIS L2, IA - ISIS interarea, IS - ISIS summary, D - EIGRP

EX - EIGRP external

O - OSPF Intra, OI - OSPF Inter, OE1 - OSPF ext 1, OE2 - OSPF ext 2

ON1 - OSPF NSSA ext 1, ON2 - OSPF NSSA ext 2

OI ::/0 [110/2]

via FE80::1, FastEthernet0/1

OI 2001:DB8:A::/64 [110/3]

via FE80::1, FastEthernet0/1

C 2001:DB8:B::/64 [0/0]

via FastEthernet0/1, directly connected

L 2001:DB8:B::1/128 [0/0]

via FastEthernet0/1, receive

C 2001:DB8:ACAD:A::/64 [0/0]

via FastEthernet0/0, directly connected

L 2001:DB8:ACAD:A::2/128 [0/0]

via FastEthernet0/0, receive

OI 2001:DB8:ACAD:B::/64 [110/2]

via FE80::1, FastEthernet0/1

OI 2001:DB8:ACAD:C::/64 [110/4]

via FE80::1, FastEthernet0/1

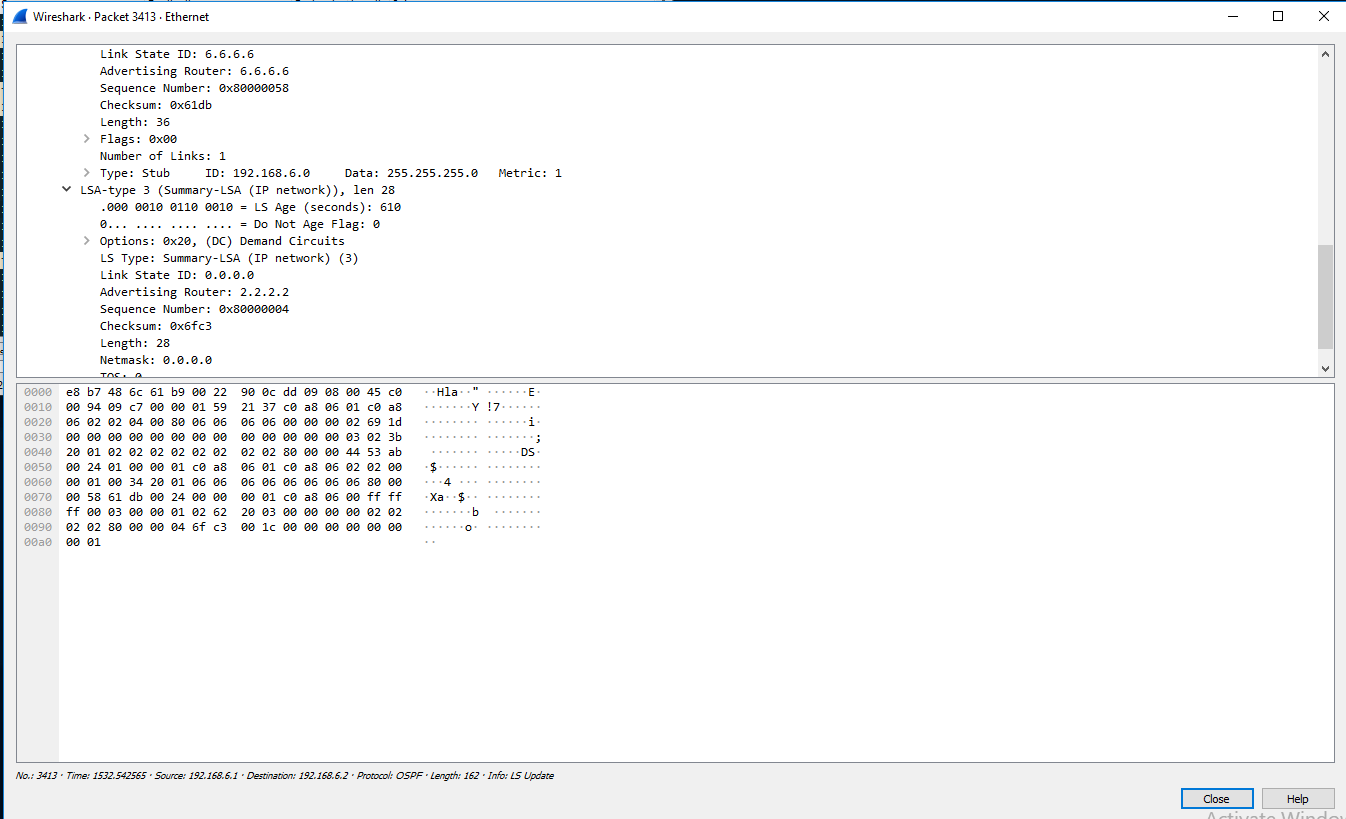
OI 2001:DB8:ACAD:D::/64 [110/3]

via FE80::1, FastEthernet0/1

L FF00::/8 [0/0]

via Null0, receive

Proof of Totally Stubby



Proof of Not-So-Stubby

